

Appl. No. : **09/938,804**
Filed : **August 24, 2001**

REMARKS

Applicant acknowledges the Examiner's finding of patentable subject matter in Claims 2-14, 22-23, and 36. Claims 1, 15, 19, 25-27, and 35 have been amended. Claims 1-36 are now pending in this application. No new matter is added. The claims amendments are supported by, for example, page 2, Figures 7-9, and the corresponding description. Applicant respectfully requests the entry of the amendments and reconsideration of the application in view of the amendments and the remarks set forth below.

Discussion of the Claims Rejected Under 35 U.S.C. §103(a)

Claims 1, 15, 19, 21, 24-27, and 30-35 were rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Huttenlocher (US 6,249,604) and Zhou et al. (US 5,892,843). Claims 16-18, 20, and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Huttenlocher, Zhou as applied to Claim 15, and further in view of Lopresti (US 5,748,807). Claim 29 was rejected under 35 U.S.C. §103(a) as being unpatentable over Huttenlocher. In response, independent Claims 1, 15, 19, 25-27, and 35 have been amended.

To establish a prima facie case of obviousness a three-prong test must be met. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available among those of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success found in the prior art. Third, the prior art reference must teach or suggest all the claim limitations. In re Vaeck, 947 F.2d 488 (Fed. Cir. 1991).

First, to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. See M.P.E.P § 2143.03. Neither Huttenlocher nor Zhou teaches or suggests the feature "locating one or more bytes having no non-white pixels in the received bitmap, wherein the locating identifies a gap in a character stroke" as recited in amended Claim 1. Huttenlocher teaches at col. 15, lines 29-35 and col. 16, lines 53-65 that the relatively small spacing between characters becomes inconsequential and is filled with black pixels as a result of median filtering. Huttenlocher also teaches at col. 15, lines 45-67 increasing the spacing between adjacent lines of text. Either the spacing between characters or between

adjacent lines of text is outside each stroke and therefore is not gap in a character stroke. Zhou teaches at Figure 4, col. 5, lines 50-67 and col. 6, lines 20-30 identifying holes in a portion of a bitmap that may represent characters or a non-text image so that characters can be distinguished from non-characters based on the number of holes identified. A hole, which is defined as a “region of white spaces surrounded entirely by black space” in Zhou, is not a gap in a character stroke. Because Huttenlocher and Zhou fail to teach all the claim limitations, Claim 1 is patentable over the combination of Huttenlocher and Zhou.

Second, to establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references or in the knowledge generally available among those of ordinary skill in the art, to modify the reference. There is no suggestion or motivation to modify Huttenlocher based on Zhou such that the modified method is read by Claim 1.

Claim 1 recites, among others, a) “locating one or more bytes having no non-white pixels in the received bitmap, wherein the locating identifies a gap in a character stroke” and b) “inserting bytes having non-white pixels into a series of bytes having no non-white pixels such that at least a portion of the identified gaps is eliminated”. Claim 1 thus requires that a portion of the gaps identified in the process of a) is eliminated in the process of b).

Zhou teaches at Figure 4, col., 5 lines 50-67 and col. 6, lines 20-30 identifying holes in a portion of a bitmap that may represent characters or non-text image. Based on the number of holes identifies and other factors, it is determined whether the portion of a bitmap represents characters or non-characters. Zhou does not teach eliminating a portion of the holes identified.

Huttenlocher teaches a method for determining the boundaries of a symbol or word string within an image which helps optical recognition of the text in a bitmap. The method includes, among others, a) blobifying an image such that the relatively small spacing between characters in a word becomes inconsequential and is filled with black pixels (see col. 15, lines 29-35), and b) adding white lines to the blobified image to increase the space between adjacent lines of text.

The Examiner suggested that modifying Huttenlocher according the Zhou would lead to a method read by Claim 1. The Examiner is unclear as to what the modified method will be like. If the modified method simply adds the process of identifying holes as taught in Zhou, then it fails to teach eliminating a portion of the identified holes and is therefore not read by Claim 1.

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If the modified method also includes a process of eliminating a portion of the identified holes, there is no motivation or suggestion to do so. The motivation offered by the Examiner is for identifying holes, not for eliminating a portion of the identified holes. Further, eliminating a portion of the identified holes tends to make the optical recognition of text more difficult, therefore defeating the goal of Huttenlocher.

Thus, it would not have been obvious to one of ordinary skill in the art to produce the invention of Claim 1 in view of Huttenlocher and Zhou.

Each of the independent Claims 15, 19, 25-27, and 35 recites a similar feature as discussed above with regard to Claim 1. For at least the same reason stated above, they are patentable over the combination of Huttenlocher and Zhou. Further, Lopresti does not cure the deficiency in Huttenlocher and Zhou. Therefore, Applicant respectfully requests withdrawal of this rejection.

Dependent Claims

Claims 2-4, 16-18, 20-24, and 28-34 are dependent either directly or indirectly on the above-discussed independent Claims 1, 15, 19, 25-27, and 35. Applicant respectfully submits that pursuant to 35 U.S.C. § 112, ¶4, the dependent claims incorporate by reference all the limitations of the claim to which they refer and include their own patentable features, and are therefore in condition for allowance. Furthermore, although Applicant has not discussed the specific rejections to dependent claims, Applicant does not necessarily agree with the characterizations of the prior art made by the Examiner. Therefore, Applicant respectfully requests the withdrawal of all claim rejections and prompt allowance of the claims.

Conclusion

In light of the above, reconsideration and withdrawal of the outstanding rejections are specifically requested. In view of the foregoing remarks, Applicant respectfully submits that the claims of the above-identified application are in condition for allowance. However, if the Examiner finds any impediment to allowing all claims that can be resolved by telephone, the Examiner is respectfully requested to call the undersigned.


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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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